



**Wisconsin Department of Transportation
Policy Research Program**

Request for Proposal

**Understanding the Decision-making Process for Drivers Faced with
Lane Restrictions or closures on Wisconsin Highways**

Issued April 20, 2011

Proposal Deadline

**Proposals must be submitted electronically to the E-mail address noted
below in PDF format no later than
5 p.m. Central Time on May 31, 2011**

**For more information regarding this RFP
contact the WisDOT Research & Library Unit
at research@dot.wi.gov.**

I. Definitions

The following definitions are used throughout the RFP:

Contractor means proposer awarded the contract

Proposer/Vendor means a company or individual submitting a proposal in response to this RFP

Technical Oversight Committee (TOC) includes the representatives from WisDOT and those who are designated by WisDOT to provide project guidance.

II. Background and Problem Statement

WisDOT owns and operates a state highway network of 12,000 miles. Although this system represents only about 10% of all roadways in the state, it carries approximately 80% of all vehicle miles travelled. However, at any given time, various parts of the state highway network may face lane restrictions or closures that impact drivers. Such restrictions or closures may be planned, such as for construction projects, events or routine maintenance. Other restrictions may be unplanned, such as due to a traffic incident, crash reconstruction, congestion due to volume or emergency weather closures.

During times of both planned and unplanned state highway lane restrictions and closures, WisDOT works closely with county and local agencies and within the department to identify and offer alternate routes to drivers. Most alternate routes have been identified well in advance, and WisDOT has protocols in place with local agencies to designate such routes, install signage, inform motorists and take many other efforts to encourage drivers to use alternate routes to avoid restricted or closed lanes. Some alternate routes incorporate county trunk highways and/or local roads and some utilize other routes of the state highway system.

Despite the plans of state and local agencies, however, during times of state highway lane restrictions or closures, WisDOT has observed that many alternate routes go far underutilized. This situation occurs even when it seems obvious that motorists would save time, avoid congestion and in general, benefit from taking the alternate route.

While WisDOT is confident that its alternate route strategies and processes are sound from a traffic engineering standpoint, this research project seeks to examine the decision-making process for drivers in response to the availability of alternate routes. The project should use this data to identify ways for the department to increase driver usage of alternate routes that would lead to improvements in overall traffic operations. In particular, the Department wishes to understand what physical, social, and psychological factors contribute to driver reluctance to making short-term and real-time routing changes.

III. Objectives

The results of this research will be used to improve WisDOT practices in traffic engineering, traffic operations, law enforcement and public outreach.

The project will focus on drivers using the Wisconsin State Trunk Highway (STH) network and will examine drivers' behaviors based on Wisconsin-specific factors such as signage, highway number and lettering systems, highway marking, weather, and other factors.

- How drivers make decisions, whether based on data, past experience, trust of the sponsor agency and other factors;
- Where and when drivers make decisions, whether well in advance of a trip, in the early stages of a trip, fully en-route, or when faced with an immediate lane restriction;
- Why drivers make the decisions, considering whether safety, convenience, time, cost, familiarity, choice of roadway or other factors play a role;
- What data sources factor into the decision. These sources can be roadway signage, the 511 phone system and website, on-board guidance systems, information in the media or other means.

IV. Scope of Work (Tasks)

This project consists of the following four tasks.

Task 1. Research synthesis. Collection and review of existing information regarding similar efforts by other states. The report will include a summary of other states' practices, as well as tools or mechanisms used to improve traffic operations when using alternative route strategies.

Task 2. User Segmentation. The Contractor will identify relevant roadway user segments. Segmentation activities will focus on distinguishing user groups that represent a unique decision-making subset when facing disruption to their expected route. One example segmentation activity could involve dividing the entire user group by trip purpose, location, and /or past driving behaviors.

Task 3. Data Collection. Behavioral analyses that will include a combination of survey efforts, focus groups, and other market study techniques intended to gauge not only the actual behavior, but also the decision making process involved when a driver is presented a preferred route disruption. The Contractor will obtain input from drivers regarding their decisions when faced with a delay and provided an opportunity to take an alternative route. Proposers must submit a recommended approach to collecting the input identified in this task. The approach may include, but not limited to, surveys, focus groups or other methods.

Prior to conducting any effort involving contact with external participants, the Contractor shall review its approach, audience, survey materials or other relevant items with the Project Manager. The Project Manager will grant written permission based on this review.

- Survey development and administration. For any part of task 3 that may include conducting formal or informal interviews, the Contractor will need to submit and gain approval for interview questions, processes, and potential interviewees to the Project Manager.
- Gap analysis of survey and focus group data versus observed behavior.

Task 4: Analyze and Recommendations. The analysis will synthesize the results of all tasks and offer potential recommendations and strategies for WisDOT to consider implementing. This should include operational “toolboxes” to promote recommended diversion behavior as well as a cost benefit analysis of toolbox implementation.

V. Project Requirements (Specific Results and Deliverables expected)

1. Quarterly Progress Reports

The Contractor must provide brief written reports of progress to the TOC at the end of each quarter of the year (March 31, June 30, September 30, December 31) for the duration of the contract using WisDOT’s quarterly report template.

2. Task Update Conference

After completion of each task, the Contractor will submit the draft results of the Task and will meet with the committee either in person or by teleconference to discuss the findings, the remaining steps of the project, and any outstanding barriers, concerns, or questions that need to be addressed prior to proceeding.

3. Draft Final Report and Presentation

- The Contractor will provide a draft final report of work completed, including an Executive summary of the study findings and analysis (Task1 and 2); and the recommendations (Task 3). The WisDOT project oversight committee will review the final report and request any changes.
- The contractor will present research results to the entire TOC.

4. Final Report and Implementation Plan

The Contractor will provide a final report of work completed to WisDOT in electronic format and 15 printed copies. The Contractor will collaborate with WisDOT to ensure that it uses the appropriate cover and technical documentation page. The Contractor will also deliver a brief study abstract for use on the reports Technical Documentation Page and a brief Implementation Plan using a form

provided by WisDOT that outlines potential steps WisDOT could take to implement the study results.

VI. Budget and Time Frame

1. Project Duration

The contract shall be effective on the date indicated on the contract and shall continue for 18 months from that date.

2. Project Budget

- Proposals cannot exceed \$100,000. **Any proposal that exceeds this amount will be considered non-responsive to the RFP requirements and will not be accepted.**
- The researcher is expected to submit the draft final report with quality technical writing and proper grammar. It is acceptable to include a technical editor on the research team to ensure these requirements are met.

VII. Implementation

The Contractor will draft a final report that synthesizes the results of all tasks and offers potential strategies for WisDOT to consider implementing.

1. WisDOT intends to use the results for this project to development a strategy that encourages drivers to take alternative routes.
2. Researcher is expected to communicate changes regarding the following:
 - a) Recommended potential changes in practice
 - b) Benefits in terms of performance and cost savings